

DIGITAL DISCONNECT: ON ONLINE LEARNING AND DIGITAL DIVIDE

Poor access to the Internet in many States must be bridged urgently to help e-learners

The full report of the NSO's survey of 'Household Social Consumption on Education in India', for July 2017-June 2018, highlights the poor state of computer and Internet access in several States. The disparities are glaring among different economic strata as well. The digital chasm that separates the privileged from the deprived remains unbridged years after the broadband policy of 2004, and its effects are painfully evident during the pandemic as students struggle to log on to online classes. While some poorly connected States may have improved since the survey period, the gaps are so stark that any development could only be modest. Only in Delhi, Himachal Pradesh and Kerala did the survey find Internet access exceeding 50% for urban and rural households taken together, while Punjab, Haryana and Uttarakhand exceeded 40%, unimpressive numbers still. Large States — Uttar Pradesh, Tamil Nadu, Andhra Pradesh and Karnataka — had access below 20%. In today's milieu, net access is critical, considering that even where mobile phones and laptops are available — some States provide them under student welfare programmes — they cannot be meaningfully used in its absence. If net connectivity is 5% to 10% in rural Odisha, Madhya Pradesh, Telangana, Karnataka and West Bengal, only a slim minority can hope to do any academic work. Many remote locations have reliability problems and power deficits, making it a challenge to keep gadgets operational even offline.

Prime Minister Modi has acknowledged the digital divide by announcing in his Independence Day address that all villages would be connected with optical fibre cable in 1,000 days. This target, reflecting enhanced ambition, follows the one set in 2011 to link panchayats through a national optical fibre network — to raise administrative capacities through information infrastructure. Evidently, successive governments have dropped the ball. States have not shown the alacrity to make a big leap either, and the deficit has now dealt a blow to students. To make up for lost time, connectivity for education must be prioritised. Mapping the needs of each district based on the NSO data will help identify areas where children do need equipment and connectivity. Such efforts have been launched globally in the wake of COVID-19, some in partnership with the telecom sector to leverage its capacity for surveys and mapping. Some companies in India have made the valuable suggestion that their used desktop computers could be refurbished and donated, for which governments need to open a programme. On the network technology front, a new gigabit speed 'wireless fibre' standard is being viewed in developed countries as a leapfrog option to link inaccessible areas; it involves high capacity spectrum (E and V bands), and is commercially not contentious. The government needs to look at all possibilities and go into overdrive to bridge the digital divide.

Meanings of Difficult Words:

- ❖ **disconnect** (noun) – a lack of connection.
- ❖ **digital divide** (noun) – the gap between the people who access computer/the internet and those who don't access them.
- ❖ **bridge** (verb) – make a difference smaller; join, link, connect, unite.
- ❖ **National Statistical Office (NSO)** (noun) – The National Statistical Office is the state statistical agency set up by an Act of the Parliament, India, Statistical Services Act (Chapter 386) 1980, responsible for collecting, compiling and disseminating official statistical information on a regular and timely basis.
- ❖ **household** (noun) – family, house.
- ❖ **state** (noun) – condition.
- ❖ **Household Social Consumption on Education** (noun) – The main objective of survey on Household Social Consumption: Education was to build indicators on participation of the persons of age 3 to 35 years in the education system, expenditure incurred on education of the household members and various indicators of those currently not attending education (i.e., for the persons who never enrolled or ever enrolled but currently not attending education). Besides, for persons of age 5 years and above, information was collected on ability to operate computer, ability to use internet and use of internet during last 30 days.

- ❖ **highlight** (verb) – underline, underscore, emphasize, call attention to.
- ❖ **disparity** (noun) – imbalance, inequality, variation.
- ❖ **glaring** (adjective) – obvious, visible, apparent, flagrant, blatant.
- ❖ strata plural form of **stratum** (noun) – level, class, echelon/rank.
- ❖ **chasm** (noun) – a clear difference between two people/groups' thoughts, feelings, opinions, etc; divergence, disunion, gulf, void, gap.
- ❖ **the privileged** (noun) – wealthy, rich, affluent people.
- ❖ **the deprived** (noun) – the poverty-stricken, the underprivileged, the disadvantaged.
- ❖ **broadband policy** (noun) – The Broadband Policy, 2004 was laid down by the Government of India in order to realize the potential of broadband services. It aimed at enhancing the quality of life by implementation of tele-education, tele-medicine, e-governance, entertainment and also to generate employment through high speed access to information and web-based communication.
- ❖ **pandemic** (noun) – the worldwide spread of a new disease; The illness spreads around the world and typically affects a large number of people across a wide area.
- ❖ **stark** (adjective) – clear, distinct, evident, obvious, striking.
- ❖ **modest** (adjective) – small, limited, scanty, meagre.
- ❖ **unimpressive** (adjective) – ordinary, average, common.
- ❖ **still** (adverb) – until now, even now.
- ❖ **milieu** (noun) – environment, background, atmosphere.
- ❖ **in the absence** (phrase) – due to unavailability of something.
- ❖ **academic** (adjective) – educational.
- ❖ **reliability** (noun) – dependability, sureness, trustability.
- ❖ **power deficit** (noun) – power shortage.
- ❖ **offline** (adjective) – not connected to the internet.
- ❖ **acknowledge** (verb) – admit, accept, recognize, realize.
- ❖ **reflect** (verb) – indicate, show, reveal, exhibit.
- ❖ **address** (noun) – speech, talk, discourse.
- ❖ **optical fibre cable** (noun) – optical fibre cable is used by many telecommunications companies to transmit telephone signals, Internet communication and cable television signals. Due to much lower attenuation (reduction of the amplitude of a signal) and interference (fading or disturbance of received radio signal), optical fiber has large advantages over existing copper wire in long-distance, high-demand applications.
- ❖ **enhanced** (adjective) – increased, upgraded, improved.
- ❖ **evidently** (adverb) – obviously, palpably, seemingly, apparently.
- ❖ **successive** (adjective) – consecutive, succeeding.
- ❖ **alacrity** (noun) – readiness, eagerness, willingness.
- ❖ **big leap** (noun) – major change, transformation; sudden development, advance, breakthrough.
- ❖ **deficit** (noun) – shortfall, deficiency, shortage, slippage, failure.
- ❖ **deal a blow** (phrase) – harm, upset, or shock someone.
- ❖ **make up for** (phrase) – offset, balance, neutralize, even up; compensate for, make amends for.
- ❖ **prioritise** (verb) – make a point of, highlight, call attention to (something as very important).
- ❖ **map** (verb) – outline, plan, work out (the details of something).
- ❖ **in the wake of** (phrase) – as a result of some event, especially an unpleasant one; aftermath, as a consequence of.
- ❖ **leverage** (verb) – use, make use of, utilize (to maximum gain).
- ❖ **refurbish** (verb) – modernize, improve, recondition, revamp.
- ❖ **front** (noun) – a particular situation (or) front line, vanguard, combat zone.
- ❖ **gigabit** (noun) – a measure of storage capacity and data transfer; One gigabit (abbreviated "Gb") is equal to one billion (10⁹) bits.
- ❖ **leapfrog** (noun) – jumping over; improvement, advancement quickly (skipping over some stages in the process).
- ❖ **possibility** (noun) – chance, probability.

- ❖ **wireless fibre** (noun) – wireless fibre is the name of the new generation’s microwave transmission. Signals are communicated wirelessly from point to point between the directional antennae in the far distance.
- ❖ **(radio) spectrum** (noun) – it refers to a range of radio-waves that are used for communication purposes.
- ❖ **contentious** (adjective) – controversial, disputable, debatable, disputed.
- ❖ **look at** (phrasal verb) – study, analyse, scrutinize.
- ❖ **go into** (phrasal verb) – research, study, analyse, review, explore.
- ❖ **overdrive** (verb) – work hard (till you feel very tired/exhausted).

A NECESSARY PAUSE: ON THE COVID-19 VACCINE RACE

Vaccines take time to develop; the first to roll out might not necessarily be the best

The global clamour for a COVID-19 vaccine has whipped up unrealistic expectations that one is just around the corner. It is thus a reality check when biopharma company AstraZeneca, piloting its vaccine candidate, AZD1222 — there were large Phase-3 trials this month — said it was voluntarily putting the multi-national trial on hold. This was after a ‘serious adverse event’ in a volunteer, which a data safety monitoring board will now examine. The company’s move was first reported by an independent medical news site, underlining the critical role that independent scrutiny plays in one of the greatest global crises. Without a specific cure, the vaccine quest has become more than just a search along the pathway that research and pharma companies have traditionally taken. There are demands that probable vaccines be put into a pipeline for accelerated approval to yield political dividends too.

U.S. President Trump has ‘demanded’ that a vaccine be available before voting day in November. India had its moment of vaccine controversy when the ICMR harried trialists to expedite testing of Bharat Biotech’s Covaxin by August 15. Russia, which is to commence its Sputnik V’s Phase-3 testing, has launched a publicity blitz. Just before reports of the trial pause, AstraZeneca and eight companies developing vaccines signed a pledge that they would not approach regulatory authorities, such as the U.S. FDA, until they had safety and efficacy data from a Phase-3 trial. Overall, the road to a vaccine has become an arena for marketing and jingoism. AZD1222 has already been tested in Phase-1 and Phase-2 trials, where the data on its safety and ability to induce a relevant response by the immune system were evaluated and independent peer-review had deemed it fit to be tested in larger populations. A Phase-3 trial is the most daunting one. In the case of a vaccine, there is the additional burden of proof that it cannot sicken the healthy and the odds of adverse reactions greatly increase when a piece of virus is injected into thousands of volunteers. Vaccine trials take years of development precisely because of the chances of unexpected complications and to expect a vaccine, which has cleared accelerated Phase-1/2 trials, to inexorably clear Phase-3, flies in the face of evidence from the history of vaccine development. Developed at Oxford, AZD1222 was evolved on an adenovirus platform not used in a commercially approved vaccine in humans. They have however been used in an experimental Ebola vaccine. India and the world will gain from a vaccine that has been critically and transparently evaluated and not one that crosses a chimerical finish line first.

Meanings of Difficult Words:

- ❖ **pause** (noun) – break/interval, temporary stoppage, suspension.
- ❖ **vaccine** (noun) – a biological preparation that improves immunity to a particular disease.
- ❖ **race** (noun) – competition, contest.
- ❖ **roll out** (phrasal verb) – launch, introduce, organize, inaugurate (something officially).
- ❖ **clamour** (noun) – protest, complaint, outcry/commotion.
- ❖ **pilot** (verb) – test, trial, examine.
- ❖ **whip up** (phrasal verb) – arouse, trigger, prompt, induce.
- ❖ **expectation** (noun) – hopes, outlook, prospects.
- ❖ **around the corner** (phrase) – coming soon, coming up, approaching, forthcoming.
- ❖ **reality check** (noun) – something which helps us to see a situation with the real facts than ideas, concepts, hopes & etc.
- ❖ **quest** (noun) – pursuit, search.

- ❖ **candidate vaccine or vaccine candidate** (noun) – a “potential” vaccine prepared in the research and development (R&D) centres and it can be used in human clinical trials.
- ❖ **phase-3 trial** (noun) – In phase 3 trial, the vaccine is given to thousands of people to confirm its safety – including rare side effects – and effectiveness. These trials involve a control group which is given a placebo.
- ❖ **put something on hold** (phrase) – postpone, put off, delay.
- ❖ **adverse** (adjective) – unfavourable, disadvantageous, bad.
- ❖ **underline** (verb) – emphasize, underscore, highlight.
- ❖ **scrutiny** (noun) – examination, inspection, investigation.
- ❖ **probable** (adjective) – possible, expected, predictable, foreseeable, anticipated.
- ❖ **(in) the pipeline** (phrase) – on the way, in preparation, in the offing.
- ❖ **accelerated** (adjective) – hastened, expedited, quickened.
- ❖ **yield** (verb) – give, provide, produce.
- ❖ **dividend** (noun) – benefit, advantage, gain.
- ❖ **harry** (verb) – pressurize, put pressure on, bother, disturb.
- ❖ **expedite** (verb) – accelerate, hasten, speed up, quicken.
- ❖ **commence** (verb) – begin, start, embark on, initiate.
- ❖ **blitz** (noun) – all-out effort, push, thrust, endeavour.
- ❖ **pledge** (noun) – undertaking, promise, agreement, commitment.
- ❖ **regulatory** (adjective) – governmental, supervisory, organizational, controlling.
- ❖ **arena** (noun) – a place of activity; a place of conflict.
- ❖ **efficacy** (noun) – In medicine, the ability of an intervention (for example, a drug or surgery) to produce the desired beneficial effect; effectiveness, efficiency, power.
- ❖ **road** (noun) – a course of action that will lead to a particular result; way/path, course, direction.
- ❖ **jingoism** (noun) – extreme/blind patriotism, xenophobia/chauvinism, extreme nationalism.
- ❖ **phase 1 trial** (noun) – In phase 1 trial of clinical testing, the vaccine is given to a small group of people to determine whether it is safe and to learn more about the immune response it provokes.
- ❖ **phase 2 trial** (noun) – In phase 2 trial, the vaccine is given to hundreds of people so scientists can learn more about its safety and correct dosage.
- ❖ **induce** (verb) – develop, produce, effect, generate.
- ❖ **peer-review** (noun) – a process by which something research or publication is evaluated by a group of experts in the appropriate field.
- ❖ **deem** (verb) – regard as, consider; view as.
- ❖ **daunting** (adjective) – intimidating, challenging, disconcerting/unsettling.
- ❖ **burden of proof** (phrase) – the duty/obligation of a party to prove/disprove their claims/allegations.
- ❖ **sicken** (verb) – become ill, fall ill, be taken ill.
- ❖ **odds** (noun) – the chances of happening something.
- ❖ **precisely** (adverb) – exactly, absolutely, squarely.
- ❖ **inexorably** (adverb) – in a way that is impossible to stop/prevent.
- ❖ **fly in the face of** (phrase) – disregard, ignore, defy/disobey.
- ❖ **evolve** (verb) – develop, progress, advance.
- ❖ **adenovirus** (noun) – common cold virus; a group of common viruses that can cause infections of the lung, stomach, intestine, and eyes. symptoms resemble those of the common cold.
- ❖ **Ebola** (noun) – Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a rare but severe, often fatal illness in humans. The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission.
- ❖ **transparently** (adverb) – directly/clearly, straightforwardly, undoubtedly, precisely.
- ❖ **chimerical** (adjective) – improbable, fantastically visionary; hoped for but illusory, impossible to achieve.